



How to Establish and Maintain Native Grasses, Forbs and Legumes

Agronomy Guide Sheet

Natural Resources Conservation Service (NRCS) - Minnesota



Photo courtesy of USDA, NRCS

What kind of grass should I seed?

Your NRCS or SWCD technician will be able to help you choose the best grass mixture suited to your site based on soils, landscape, climate and the intended purpose of the planting. In addition to the kind of grass (such as switchgrass, indiangrass, canada wildrye, etc.), specific varieties of each grass will also be required. These are the varieties that will grow in a particular area of the state. Planting varieties that don't grow well in your part of the state will increase the chances of a seeding failure.

Seed

Native grass seeding rates are always given in amounts of Pure Live Seed (PLS) needed. Pure live seed is the percent germination (+ dormant seed) x the percent purity of the bulk seed. This information is required to be listed on the seed tag.

Debearding indiangrass, big bluestem and little bluestem seed removes small hairs and appendages, producing a free flowing seed that can usually be planted with conventional or traditional seeding equipment. Debearded seed

The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation and marital or familial status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication program information (Braille, large Print, audiotape, etc.) should contact USDA's Target Center at (202)-720-2600 (voice and TDD).

To file a complaint of discrimination, write the USDA, Director, Office of Civil Rights, Room 326W, Whitten Building, 14th and Independence Ave. SW. Washington D.C., 20250-9410, or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.

may be available from commercial seed dealers. If not debearded, these grasses must be broadcast seeded or planted with a special drill designed to plant light, fluffy seed.

Site Preparation and Seeding

Conventional seeding into a tilled seedbed:

The area to be seeded is worked up prior to seeding using a disk, field cultivator or similar equipment. All existing vegetation and weeds must be killed. It may be necessary to use chemicals in addition to tillage to control weeds and vegetation. The soil is worked to a depth of three inches and then packed before seeding, using a harrow, several passes with an empty drill or a cultipacker, if available. This provides a firm seedbed. As a general rule, a seedbed is considered firm enough when the foot tracks left by an adult are no deeper than one-half inch. If the soil is too loose, the seed will be planted too deep and will not germinate or grow. **Seedbed preparation is one of the most important factors in determining the success or failure of a seeding.**

Seed is planted at a depth of ¼ to ½ inch using a grassland drill, grain drill with press wheels, cultipacker seeder, or by broadcasting. (Fertilizer spreaders are often used to broadcast seed). After seeding, the field will be packed again to insure good seed to soil contact. If done correctly, some seed may be seen on the surface after planting.



Photo courtesy of USDA-NRCS.

No-till seeding: This procedure is especially applicable on steep, highly erodible sites. It is used when the area being planted is currently in grass or has crop residue on it, and you don't want to work it up as described above. For areas in grass, the existing vegetation is killed with herbicides, preferably in the fall prior to planting the following spring. An additional herbicide application may be needed in the spring prior to planting to kill any weeds and regrowth. If the land has been in grass for many years, usually a thick layer of residue has built up on the soil surface. In addition to killing the grass with herbicide, this layer will have to be removed in order to prepare a good seedbed for successful no-till planting. To do this, you may graze or mow the field and remove the residue in late summer (the year prior to planting). Let the vegetation begin to regrow, and spray it in the fall with an appropriate herbicide. As mentioned above, an additional herbicide application may be needed in the spring. Timing of the herbicide is the same.

For areas in cropland, leave the existing crop residue in the fall. Spray a burndown herbicide in the spring, prior to planting to kill the weeds that have started to grow. Good seedbed preparation is essential for a successful no-till planting.

Temporary Cover

If the required seed is not available, the seeding dates have passed, or chemical carry over will not allow the establishment of the planned cover, a temporary cover may be needed for erosion control and weed suppression. Your NRCS or SWCD technician can give you a choice of crops and seeding rates. Temporary

cover crops shall be clipped to control weeds and prevent viable seed formation. The permanent seeding can then be done during the next seeding period. You may either prepare a conventional seedbed or do a no-till seeding into the cover crop residue.

Seeding Dates

North: May 15 – July 1

South: May 15 – June 15

Dormant: Statewide after November 1. Dormant seeding must be made into at least 70% surface cover from a temporary cover crop or row crop residue, or into standing small grain stubble. Dormant seeding is riskier than planting in the spring.



Weed Control

Weeds must be controlled during the seeding year to reduce the competition for the new grasses and forbs that were planted. The weeds should be mowed when they reach a height of 6 to 8 inches. Do not cut the field too short or you may damage the permanent seeding. Mowing may be needed 2 or 3 times the first year. After the first year, the native plants should be able to out-compete the weeds and mowing usually is not needed. If noxious weeds (such as Canada thistle) appear at any time, these weeds must be controlled, either by spot mowing or spraying. In some cases, government programs may restrict the timing, type and amount of spraying, mowing or burning which can occur after establishment. Check with your local NRCS or SWCD office to see if this applies.